

September 2000 Proposed Regulations

1 **BOARD FOR WATERWORKS AND WASTEWATER WORKS OPERATORS**

2

3

REGULATIONS

4

5

PART I.

6

7

DEFINITIONS, LICENSING AND CLASSIFICATION REQUIREMENTS.

8

9

10 ***18 VAC 160-20-10. Definitions.***

11

12 The following words and terms, when used in this chapter, shall have the following meaning
13 unless the context clearly indicates otherwise:

14

15 "Board" means the Board for Waterworks and Wastewater Works Operators.

16

17 "Category" means the two divisions of waterworks and wastewater works ~~and~~ operators'
18 licenses, one being waterworks and the second being wastewater works.

19

20 "Classification" means the divisions of each category of waterworks and wastewater works
21 ~~and~~ operators' licenses into classes where Class "I" represents the highest classification.

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1 "Contact hour" means 50 minutes of participation in a structured training activity.

2

3 "Continuing Professional Education (CPE)" means participation in a structured training
4 activity that enables a licensed waterworks operator to maintain and increase the competence
5 required to assure the public's protection.

6

7 "Department" means the Virginia Department of Professional and Occupational Regulation.

8

9 "Experience" means time spent learning how to physically and theoretically operate the
10 waterworks or wastewater works as an operator-in-training or time spent operating a waterworks
11 or wastewater works for which the operator is currently licensed.

12

13 "Licensed operator" means an operator with a license in the category and with a
14 classification equal to or higher than the classification of the waterworks or wastewater works
15 being operated.

16

17 "Licensee" means an individual holding a valid license issued by the board.

18

19 "Licensure" means a method of regulation whereby the Commonwealth, through the
20 issuance of a license, authorizes a person, possessing the character and minimum skills, to
21 engage in the practice of a profession or occupation which is unlawful to practice without a
22 license.

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"Operate" means any ~~the~~ act of an individual, which may impact on the finished water quality at a waterworks or the plant effluent at a wastewater works.

"Operating staff" means individuals employed or appointed by an owner to work at a waterworks or wastewater works.

"Operator" means any individual employed or appointed by any owner, and who is designated by such owner to be the person in responsible charge, such as a supervisor, a shift operator, or a substitute in charge, and whose duties include testing or evaluation to control waterworks or wastewater works operations. Not included in this definition are superintendents or directors of public works, city engineers, or other municipal or industrial officials whose duties do not include the actual operation or direct supervision of waterworks or wastewater works.

"Operator-in-training" means an individual employed by an owner to work under the direct supervision and direction of an operator holding a valid license in the proper category and classification for the purpose of gaining experience and knowledge in the duties and responsibilities of an operator of a waterworks or wastewater works. An operator-in-training is not an operator.

"Owner" means the Commonwealth of Virginia, or any political subdivision thereof, any

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1 public or private institution, corporation, association, ~~firm or company~~ or any other entity
2 organized or existing under the laws of this Commonwealth or of any other state or nation, or
3 any person or group of persons acting individually or as a group, who own, manage, or maintain
4 waterworks or wastewater works.

5

6 ~~"Person" means any individual, group of individuals, a corporation, a partnership, a business~~
7 ~~trust, an association or other similar legal entity engaged in operating waterworks or wastewater~~
8 ~~works.~~

9 [Remains in Code]

10

11 "Renewal" means continuing the effectiveness of a license for another period of time.

12

13 "Responsible charge" means the designation by the owner of any individual to have the duty
14 and the authority to operate ~~or modify the operation of~~ a waterworks or wastewater works.

15

16 "Structured training activity" means a formal educational process designed to permit a
17 participant to learn a given subject or subjects through interaction with an instructor in a course,
18 seminar, conference or other performance-oriented format.

19

20 "Wastewater works" means ~~each~~ a system of (i) sewerage systems or sewage treatment
21 works serving more than 400 persons, as set forth in § 62.1-44.18 of the Code of Virginia; (ii)
22 sewerage systems or sewage treatment works serving fewer than 400 persons, as set forth in §

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1 62.1-44.18 of the Code of Virginia, if so certified by the State Water Control Board; and (iii)
2 facilities for discharge ~~to~~ into state waters of industrial wastes or other wastes, if certified by the
3 State Water Control Board.

4
5 "Waterworks" means ~~each a system of that structures and appliances used in connection~~
6 ~~with the collection, storage, purification, and treatment of water~~ serves piped water for drinking
7 or domestic use to (i) at least 15 connections, or (ii) at least 25 of the same individuals for more
8 than six months out of the year. ~~and the distribution thereof to the public, except distribution~~
9 ~~pipng. Systems serving fewer than 400 persons shall not be considered to be a waterworks~~
10 ~~unless certified by the Department of Health to be such.~~ The term waterworks shall include all
11 structures, equipment, and appurtenances used in the storage, collection, purification, treatment
12 and distribution of pure water, except the piping and fixtures inside the building where such
13 water is delivered.

14

15 **~~18 VAC 160-20-20. License required. (Repealed)~~**

16

17 ~~—To serve as an operator of a waterworks or wastewater works, it shall be necessary to hold a~~
18 ~~valid license issued by the board of a classification equal to or greater than the classification of~~
19 ~~the waterworks or wastewater works and in the appropriate category.~~

20 [Moved to 18 VAC 160-20-74]

21

22 **~~18 VAC 160-20-30. License renewal required. (Repealed)~~**

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1
2 ~~— A. Licenses for waterworks operators shall expire on the last day of February of each~~
3 ~~odd numbered year. Licenses for wastewater works operators shall expire on the last day of~~
4 ~~February of each even numbered year. The Department of Professional and Occupational~~
5 ~~Regulation shall mail a renewal notice to the licensee outlining the procedures for renewal.~~
6 ~~Failure to receive this notice shall not relieve the licensee of the obligation to renew.~~

7
8 ~~B. Each licensee applying for renewal shall return the renewal notice and fee established in~~
9 ~~18 VAC 160 20 40 of this chapter to the Department of Professional and Occupational~~
10 ~~Regulation prior to the expiration date shown on the license. If the licensee fails to receive the~~
11 ~~renewal notice, a copy of the expired license may be submitted with the required fee.~~

12
13 ~~C. If the operator fails to renew the license within 30 days after the expiration date on the~~
14 ~~license, a penalty fee as established in 18 VAC 160 20 40 of this chapter shall be required, in~~
15 ~~addition to the renewal fee.~~

16
17 ~~D. Any operator failing to renew within one year of the expiration date on the license must~~
18 ~~apply for a new license by examination in accordance with Part II of this chapter. Such an~~
19 ~~individual shall be deemed to be eligible to sit for the same category and class of license as the~~
20 ~~expired license.~~

21
22 ~~E. Limited waterworks operator licenses, issued under the authority of § 4.02.2 of the Rules~~

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1 ~~and Regulations of the State Board for Certification of Operators of Water and Wastewater~~
2 ~~Works (effective March 1, 1977), expiring on February 28, 1993, will not be renewed. Limited~~
3 ~~wastewater works operator licenses, issued under the authority of § 4.02.2 of the Rules and~~
4 ~~Regulations of the State Board for Certification of Operators of Water and Wastewater Works~~
5 ~~(effective March 1, 1977), expiring on February 28, 1994, will not be renewed. A holder of a~~
6 ~~limited license shall be deemed to have met the experience and education requirements of this~~
7 ~~chapter and shall be eligible to sit for an examination upon application in the same category and~~
8 ~~in the same or lower classification as the limited license currently held.~~

9

10 [Moved to 18 VAC 160-20-106]

11

12 **18 VAC 160-20-40. Fees.-(Repealed)**

13 ~~— Fees are nonrefundable and shall not be prorated.~~

14

15 ~~— The following fees shall apply:~~

16

17 ~~— 1. Application for licensure by examination or by reciprocity \$85.~~

18

19 ~~2. Application for reexamination \$75.~~

20

21 ~~— 3. Renewal of license \$45.~~

22

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1 ~~4. Penalty for failure to renew license within 30 days of expiration \$25.~~

2

3 [Moved to 18 VAC 160-20-102]

4

5 **~~18 VAC 160-20-50. Waterworks.(Repealed)~~**

6

7 ~~A. Class V shall mean any waterworks as follows:~~

8

9 ~~1. Waterworks employing no treatment other than chlorine disinfection, including~~
10 ~~consecutive water systems or groundwater systems with no treatment or consecutive systems~~
11 ~~employing repumping or rechlorination or both, and classified by the Department of Health as~~
12 ~~public water supplies; or~~

13

14 ~~2. Waterworks classified by the Department of Health as Class V waterworks.~~

15

16 ~~B. Class IV shall mean any waterworks as follows:~~

17

18 ~~1. Waterworks employing disinfection, corrosion control, iron and manganese removal,~~
19 ~~softening, slow sand filtration, rechlorination, and other approved methods of treatment, or any~~
20 ~~combination thereof, except fluoridation, serving less than 5,000 persons and classified by the~~
21 ~~Department of Health as public water supplies; or~~

22

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1 ~~2. Waterworks classified by the Department of Health as Class IV waterworks.~~

2

3 ~~— C. Class III shall mean any waterworks as follows:~~

4

5 ~~— 1. Waterworks employing processes including, but not limited to, chemical coagulation,~~
6 ~~sedimentation, filtration other than slow sand filtration, disinfection, fluoridation, aeration,~~
7 ~~corrosion control, or any combination thereof, serving a population of less than 5,000, or having~~
8 ~~a rated capacity of less than 0.5 mgd; or~~

9

10 ~~— 2. Waterworks employing processes including disinfection, corrosion control, iron and~~
11 ~~manganese removal, softening, rechlorination, and other approved methods of treatment serving~~
12 ~~5,000 persons or more; or~~

13

14 ~~— 3. Waterworks employing fluoridation which are not under a higher classification and which~~
15 ~~are classified by the Department of Health as public water supplies; or~~

16

17 ~~— 4. Waterworks classified by the Department of Health as Class III waterworks.~~

18

19 ~~— D. Class II shall mean any waterworks as follows:~~

20

21 ~~— 1. Waterworks employing processes including, but not limited to, chemical coagulation,~~
22 ~~sedimentation, filtration, disinfection, fluoridation, aeration, corrosion control, or any~~

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1 ~~combination thereof, serving a population of at least 5,000 persons, but less than 50,000 persons,~~
2 ~~or having a rated capacity of at least 0.5 mgd, but less than 5.0 mgd; or~~

3
4 ~~— 2. Waterworks employing processes including, but not limited to, chemical coagulation,~~
5 ~~sedimentation, filtration, and disinfection, employing the high rate filtration process, and having~~
6 ~~a filter rate greater than 2.0 gpm/sq. ft., serving a population less than 50,000 persons, or having~~
7 ~~a rated capacity less than 5.0 mgd; or~~

8
9 ~~— 3. Waterworks classified by the Department of Health as Class II waterworks.~~

10
11 ~~— E. Class I shall mean any waterworks employing processes including, but not limited to,~~
12 ~~chemical coagulation, sedimentation, filtration, disinfection, fluoridation, aeration, corrosion~~
13 ~~control, or any combination thereof, serving a population of 50,000 persons or more or having a~~
14 ~~rated capacity of 5.0 mgd or more.~~

15
16 [Moved to 18 VAC 160-20-120]

17
18 **18 VAC 160-20-60. Wastewater works.(Repealed)**

19
20 ~~— A. Class IV shall mean any wastewater works as follows:~~

21
22 ~~— 1. Raw sewage stabilization ponds with a design hydraulic capacity greater than 0.04 mgd~~

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1 ~~but equal to or less than 1.0 mgd; or~~

2

3 ~~— 2. Wastewater works classified by the State Water Control Board as Class IV wastewater~~
4 ~~works.~~

5

6 ~~— B. Class III shall mean any wastewater works as follows:~~

7

8 ~~— 1. Wastewater works using biological treatment methods having a design hydraulic capacity~~
9 ~~greater than 0.04 mgd, but equal to or less than 0.5 mgd; or~~

10

11 ~~— 2. Wastewater works using physical/chemical treatment methods having a design hydraulic~~
12 ~~capacity greater than 0.04 mgd, but equal to or less than 0.5 mgd; or~~

13

14 ~~— 3. Wastewater works using combinations of biological and physical/chemical treatment~~
15 ~~methods having a design hydraulic capacity greater than 0.04 mgd, but equal to or less than 0.1~~
16 ~~mgd; or~~

17

18 ~~— 4. Raw sewage stabilization ponds, with a design hydraulic capacity greater than 1.0 mgd; or~~

19

20 ~~— 5. Wastewater works that do not use biological or physical/chemical treatment methods but~~
21 ~~are classified by the State Water Control Board as Class III wastewater works.~~

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1 ~~C. Class II shall mean any wastewater works as follows:~~

2
3 ~~1. Wastewater works using biological treatment methods having a design hydraulic capacity~~
4 ~~greater than 0.5 mgd, but equal to or less than 5.0 mgd; or~~

5
6 ~~2. Wastewater works using physical/chemical treatment methods having a design hydraulic~~
7 ~~capacity greater than 0.5 mgd, but equal to or less than 5.0 mgd; or~~

8
9 ~~3. Wastewater works using combinations of biological and physical/chemical treatment~~
10 ~~methods, having a design hydraulic capacity greater than 0.1 mgd, but equal to or less than 2.5~~
11 ~~mgd.~~

12
13 ~~D. Class I shall mean any wastewater works as follows:~~

14
15 ~~1. Wastewater works using biological treatment methods having a design hydraulic capacity~~
16 ~~greater than 5.0 mgd; or~~

17
18 ~~2. Wastewater works using physical/chemical treatment methods having a design hydraulic~~
19 ~~capacity greater than 5.0 mgd; or~~

20
21 ~~3. Wastewater works using combinations of biological and physical/chemical treatment~~
22 ~~methods, having a design hydraulic capacity greater than 2.5 mgd.~~

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1
2 ~~— E. Biological treatment methods as used in this section shall mean a fixed film or suspended~~
3 ~~growth biological treatment process, such as:~~

4
5 ~~1. Activated sludge.~~

6
7 ~~— 2. Trickling filter.~~

8
9 ~~— 3. Aerated lagoon.~~

10
11 ~~— 4. Rotating biological contactor.~~

12
13 ~~5. Land application.~~

14
15 ~~— 6. Biological nutrient removal process.~~

16
17 ~~— F. Physical/chemical treatment methods as used in this section shall mean a treatment~~
18 ~~process such as:~~

19
20 ~~— 1. Chemical coagulation, flocculation and precipitation.~~

21
22 ~~— 2. Filtration.~~

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1

2 ~~3. Carbon adsorption.~~

3

4 ~~4. Breakpoint chlorination.~~

5

6 ~~5. Demineralization (including but not limited to ion exchange, reverse osmosis,~~

7 ~~electrodialysis).~~

8

9 [Moved to 18 VAC 160-20-130]

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PART II.

ENTRY LICENSE REQUIREMENTS.

18 VAC 160-20-70. Licensure. (Repealed)

~~— The board shall issue a Class V, IV, III, II, or I license only after an individual has met all experience and examination requirements as set forth in this chapter. Each license shall be in the appropriate category and classification and shall indicate the highest classification of works the holder is qualified to operate.~~

18 VAC 160-20-74. License required.

To serve as an operator of a waterworks or wastewater works, it shall be necessary to hold a valid license issued by the board for a classification equal to or greater than the classification of the waterworks or wastewater works to be operated and in the appropriate category. Issuance of a new classification of license shall void all previously issued licenses in the same category. No licensee shall hold two licenses of different classifications in the same category. The board shall issue a license only after an individual has met all experience and examination requirements as set forth in these regulations.

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1 **18 VAC 160-20-76. Application**

2
3 A. Individuals desiring to be issued a license shall apply on forms supplied by the board.

4 The application shall be completed according to the instructions provided with the
5 application. Incomplete applications will be returned to the applicant. Fees shall
6 remain valid for 90 days and shall not be refunded.

7
8 B. Individual applicants shall be at least 18 years of age.

9
10 C. The applicant shall disclose the following information about himself.

11
12 1. Any conviction by a court in any jurisdiction of any felony or of any
13 misdemeanor involving lying, cheating or stealing, or of any material
14 misrepresentation while engaged in waterworks or wastewater works activities.
15 Any plea of nolo contendere shall be considered a conviction for purposes of this
16 subsection. A certified copy of a final order, decree or case decision by a court or
17 regulatory agency with the lawful authority to issue such order, decree or case
18 decision shall be prima facia evidence of such conviction or discipline.

19
20 2. Any disciplinary action taken by the board or another jurisdiction in connection
21 with the applicant's activities as a waterworks or wastewater works operator,
22 including but not limited to, monetary penalties, fines, suspension, revocation, or

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1 surrender of a license in connection with a disciplinary action.

2

3 D. Each applicant shall disclose his physical address. A post office box shall not be
4 accepted in lieu of a physical address.

5

6 E. The fee established by 18 VAC 160-20-102 shall accompany the application and shall
7 not be refunded.

8

9 F. The receipt of an application and the deposit of fees in no way indicates approval of
10 the application by the board.

11

12 ***18 VAC 160-20-80. Licensure by reciprocity.*** Individuals certified or licensed in other
13 ***jurisdictions.***

14

15 ~~The board may issue a license to any person~~ Any applicant holding a ~~currently~~ valid license
16 or certificate ~~in any state, territory, or possession of the United States, or in any foreign country,~~
17 ~~or a certificate issued by the Association of Boards of Certification, provided the requirements~~
18 ~~and standards under which the license or certificate was issued are equivalent to those~~
19 ~~established by this chapter~~ in another jurisdiction who meets the requirements of this chapter,
20 including experience and education, may take the examination in the Virginia category and
21 classification comparable to the license or certificate held in the other jurisdiction.

22

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1 **18 VAC 160-20-85. Restricted License of Class VI Waterworks.**

2
3 A. The board shall issue a restricted license to operate a Class VI waterworks to the Class
4 VI waterworks owner or the Class VI waterworks owner's designee upon application
5 for such restricted license by the waterworks owner or his designee and provided said
6 application is received within two years after the effective date of this chapter.
7 Waterworks owners or their designees who fail to apply within the two year period
8 must apply for a license pursuant to 18 VAC 160-20-90. A restricted license shall be
9 limited to one license per Class VI waterworks facility. The restricted license is site
10 specific and non-transferable. The restricted license expires three years from the date
11 of issuance, and is not subject to renewal.

12
13 B. Each applicant for a restricted license to operate a Class VI waterworks shall apply on
14 the application form provided by the board which establishes that the applicant:

- 15
16 1. Is at least 18 years of age.
17
18 2. Has the following education and experience:
19
20 a. A high school diploma or G.E.D. and six months experience, or
21
22 b. Has no high school diploma or G.E.D. and has 12 months experience.

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- 3. Is the current operator of a specific Class VI system and does not hold a waterworks license issued by the board; and

- 4. Understands that the restricted Class VI license that may be issued becomes invalid if he leaves the facility for which the the license is sought or is issued a waterworks operator license in any other Class.

18 VAC 160-20-90. Licensure by experience and examination.

Licensure is based upon having applicable experience and by demonstrating minimum required knowledge, skills and abilities through an ~~by~~ examination. Education, ~~specialized~~ training, and experience in the other category may be substituted for the required experience as specified in this section. ~~These requirements are summarized in Table 1.~~

A. Experience. For purposes of this chapter, experience requirements are expressed in terms of calendar periods of full-time employment ~~with actual hands-on experience~~ as an operator or as an operator-in-training at a waterworks or wastewater works in the same category as the license being applied for. All experience claimed on the application for licensure must be certified by the individual's immediate supervisor.

- 1. A year of full-time employment is defined as a minimum of 1760 hours ~~per year~~

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1 during a twelve-month period or a minimum of 220 workdays per year in a twelve
2 month period. A workday is defined as attendance at a waterworks or wastewater
3 works to the extent required for proper operation. More than 1760 hours or 220 work
4 days during a twelve month period will not be considered as more than one year of
5 full time employment.

6
7 2. Experience gained as an operator-in-training must be obtained under the supervision
8 of an operator holding a valid license of the same category and of a classification
9 equal to or higher than the classification of the waterworks or wastewater works at
10 which the experience is gained. The supervising operator shall certify the experience
11 on the application form as accurate and relevant to the classification and category of
12 license for which the application is being submitted.

13
14 3. Partial credit may be given for actual hours of work or workdays experience if the
15 applicant works as an operator or as an operator-in-training less than full time.

16
17 4. Experience solely limited to the operation and maintenance of wastewater collection
18 systems and water distribution systems ~~operation and maintenance~~, laboratory work,
19 plant maintenance, and other nonoperating duties shall not be counted as experience
20 as an operator or as an operator-in-training.

21
22 5. Experience limited to water distribution system operation and maintenance shall be

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1 considered only when applying for a Class V or Class VI waterworks operator
 2 license.

3

4 **Table 1. Summary of requirements for operator's license by class.**

License Class	Education ¹	Current License	Total Experience Required (Years)	Experience must be at this class facility or higher (Years)				Maximum Substitution Permitted (Years)
				Cl.V	Cl.IV	Cl.III	Cl.II	
V	BS degree	None	0.5	0.5				0.0
	High School	None	0.5	0.5				0.0
	None	None	1.0	1.0				0.0
IV	BS degree	None	0.5		0.5			0.0
	High School	None	0.5		0.5			0.0
	None	None	1.0		1.0			0.0
III	BS degree	None	1.0		1.0			0.0
		IV	1.0		1.0			0.0
	High School	None	2.0		2.0			1.0

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		IV	2.0		2.0			1.0
	None	IV	4.0		4.0			2.0
H	BS degree	None	1.5			0.5		0.0
		IV	1.5			0.5		0.0
		III	1.5			0.5		0.0
	High School	III	4.0			2.0		2.0
	None	III	7.0			3.0		3.5
I	BS degree	H	2.5				1.0	0.0
	High School	H	6.0				2.0	3.0
	None	H	10.0		4.0	3.0	3.0	5.0

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~~[FN1] BS degree = bachelor's degree in engineering or engineering technology;~~
~~—or in physical, biological, or chemical science or engineering. All other~~
~~bachelor's degrees will be considered the equivalent of high school education~~
~~for the purpose of meeting the education requirement, although individual~~
~~courses in science, engineering, or public health may be substitutes for~~
~~experience in accordance with 18 VAC 160-20-90.~~

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1 ~~High School = high school diploma or GED or college degree other than BS degree~~

2 ~~–defined above.~~

3

4 ~~All experience must be at a waterworks or wastewater works of the appropriate~~

5 ~~- category and of a class equal to or higher than the class equal to or higher~~

6 ~~–than the class indicated in the table. Experience gained at a waterworks or~~

7 ~~–wastewater works of higher class than currently held license must be direct~~

8 ~~–supervision and direction of a properly licensed operator.~~

9

10 B. Specific requirements for licenses.

11

12 1. Specific requirements for a Class VI license. Applicants for licensure as a Class VI

13 waterworks operator shall meet one of the following requirements and pass a

14 board-approved examination:

15

16 a. Have (i) a high school diploma or GED and (ii) at least six months of experience

17 as an operator-in-training in a Class VI, Class V, Class IV, Class III, Class II, or

18 Class I waterworks; or

19

20 b. Have (i) no high school diploma and (ii) at least one year of experience as an

21 operator-in-training in a Class VI, Class V, Class IV, Class III, Class II, or Class I

22 waterworks.

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2. Specific requirements for a Class V license. Applicants for licensure as a Class V waterworks operator shall meet one of the following requirements and pass a board-approved examination:

a. Have (i) a high school diploma or GED and (ii) at least six months of experience as an operator-in-training ~~of waterworks of~~ in a Class V, Class IV, Class III, Class II, or Class I waterworks; or

b. Have (i) no high school diploma and (ii) at least one year of experience as an operator-in-training ~~of in waterworks of~~ a Class V, Class IV, Class III, Class II, or Class I waterworks.

3. Specific requirements for a Class IV license. Applicants for licensure as either a Class IV waterworks or wastewater works operator shall meet one of the following requirements and pass a board-approved examination:

a. Have (i) a high school diploma or GED and (ii) at least six months of experience as an operator-in-training ~~of in waterworks or wastewater works of~~ a Class IV, Class III, Class II, or Class I waterworks or wastewater works (as appropriate); or

b. Have (i) no high school diploma and (ii) at least one year of experience as an

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1 operator-in-training of ~~in waterworks or wastewater works of a~~ Class IV, Class
2 III, Class II, or Class I waterworks or wastewater works (as appropriate).

3
4 4. Specific requirements for a Class III license. Applicants for licensure as either a Class
5 III waterworks or wastewater works operator shall meet one of the following
6 requirements and pass a board-approved examination:

7
8 a. Have (i) a bachelor's degree in engineering or engineering technology, or in
9 physical, biological or chemical science; and (ii) at least one year of experience as
10 an operator-in-training of ~~in waterworks or wastewater works of a~~ Class IV, Class
11 III, Class II, or Class I waterworks or wastewater works (as appropriate); or

12
13 b. Have (i) a bachelor's degree in engineering or engineering technology, or in
14 physical, biological or chemical science; (ii) a Class IV license; and (iii) a total of
15 at least one year of experience as an operator or operator-in-training ~~in of~~
16 ~~waterworks or wastewater works of a~~ Class IV waterworks or wastewater works
17 (as appropriate) or as an operator-in-training of ~~in waterworks or wastewater~~
18 ~~works of a~~ Class III, Class II, or Class I waterworks or wastewater works (as
19 appropriate); or

20
21 c. Have (i) a high school diploma or GED and (ii) at least two years of experience as
22 an operator-in-training of ~~in waterworks or wastewater works of a~~ Class IV, Class

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1 III, Class II, or Class I waterworks or wastewater works (as appropriate); or

2
3 d. Have (i) a high school diploma or GED, (ii) a Class IV license, and (iii) a total of
4 at least two years of experience as an operator or operator-in-training ~~of in~~ in
5 ~~waterworks or wastewater works of a~~ Class IV waterworks or wastewater works
6 (as appropriate) or as an operator-in-training ~~of in~~ in ~~waterworks or wastewater~~
7 ~~works of a~~ Class III, Class II, or Class I waterworks or wastewater works (as
8 appropriate); or

9
10 e. Have (i) no high school diploma, (ii) a Class IV license, and (iii) a total of at least
11 four years of experience as an operator or operator-in-training ~~in of~~ in ~~waterworks or~~
12 ~~wastewater works of a~~ Class IV waterworks or wastewater works (as appropriate)
13 or as an operator-in-training ~~of in~~ in ~~waterworks or wastewater works of a~~ Class III,
14 Class II, or Class I waterworks or wastewater works (as appropriate).

15
16 5. Specific requirements for a Class II license. Applicants for licensure as either a Class
17 II waterworks or wastewater works operator shall meet one of the following
18 requirements and pass a board-approved examination:

19
20 a. Have (i) a bachelor's degree in engineering or engineering technology, or in
21 physical, biological or chemical science; and (ii) a total of at least 1 1/2 years of
22 experience, of which at least six months without substitutions shall be as an

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1 operator-in-training of in waterworks or wastewater works of a Class III,
2 Class II or Class I waterworks or wastewater works (as appropriate); or

3
4 b. Have (i) a bachelor's degree in engineering or engineering technology, or in
5 physical, biological or chemical science; (ii) a Class IV license; and (iii) a total of
6 at least 1 1/2 years of experience, of which at least six months without
7 substitutions shall be as an operator-in-training of in waterworks or wastewater
8 works of a Class III, Class II or Class I waterworks or wastewater works (as
9 appropriate); or

10
11 c. Have (i) a bachelor's degree in engineering or engineering technology, or in
12 physical, biological or chemical science; (ii) a Class III license; and (iii) a total of
13 at least 1 1/2 years of experience, of which at least six months, without
14 substitutions shall be as an operator or operator-in-training of in waterworks or
15 wastewater works of a Class III waterworks or wastewater works (as appropriate)
16 or as an operator-in-training of in waterworks or wastewater works of a Class II or
17 Class I waterworks or wastewater works (as appropriate); or

18
19 d. Have (i) a high school diploma or GED, (ii) a Class III license, and (iii) a total of
20 at least four years of experience of which at least two years without substitutions
21 shall be as an operator or operator-in-training of in waterworks or wastewater
22 works of a Class III waterworks or wastewater works (as appropriate) or as an

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1 operator-in-training of in waterworks or wastewater works of a Class II or Class I
2 waterworks or wastewater works (as appropriate); or

- 3
- 4 e. Have (i) no high school diploma, (ii) a Class III license, and (iii) a total of at least
5 seven years of experience of which at least three years without substitutions shall
6 be as an operator or operator-in-training of in waterworks or wastewater works of
7 a Class III waterworks or wastewater works (as appropriate) or as an
8 operator-in-training of in waterworks or wastewater works of a Class II or Class I
9 waterworks or wastewater works (as appropriate).

- 10
- 11 6. Specific requirements for a Class I license. Applicants for licensure as either a Class I
12 waterworks or wastewater works operator shall meet one of the following
13 requirements and pass a board-approved examination:

- 14
- 15 a. Have (i) a bachelor's degree in engineering or engineering technology, or in
16 physical, biological or chemical science; (ii) a Class II license; and (iii) a total of
17 at least 2 1/2 years of experience, of which at least one year without substitutions
18 shall be as an operator or operator-in-training of in waterworks or wastewater
19 works of a Class II waterworks or wastewater works (as appropriate) or as an
20 operator-in-training of in waterworks or wastewater works of a Class I
21 waterworks or wastewater works (as appropriate); or

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1 b. Have (i) a high school diploma or GED, (ii) a Class II license and (iii) a total of at
2 least six years of experience of which at least two years without substitutions shall
3 be as an operator or operator-in-training of ~~in waterworks or wastewater works of~~
4 a Class II waterworks or wastewater works (as appropriate) or as an
5 operator-in-training of ~~in waterworks or wastewater works of a Class I~~
6 waterworks or wastewater works (as appropriate); or

7
8 c. Have (i) no high school diploma, (ii) a Class II license, and (iii) a total of at least
9 10 years of experience of which at least three years without substitutions shall be
10 as an operator or operator-in-training of ~~in waterworks or wastewater works of a~~
11 Class II waterworks or wastewater works (as appropriate) or as an
12 operator-in-training of ~~in waterworks or wastewater works of a Class I~~
13 waterworks or wastewater works (as appropriate).

14
15 C. Substitutions for required experience.

16
17 For the purpose of meeting the experience requirements for ~~licenses of Class III, Class II,~~
18 and Class I licenses, experience in the other category, relevant training in waterworks and
19 wastewater works operation, and formal education may be substituted for actual hands-on
20 experience in the category being applied for.

21
22 ~~1. Limitations on substitution.~~

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~~— Substitutions may not reduce the actual operator experience required to less than 2 1/2 years for a Class I license, to less than 1 1/2 years for a Class II license, to less than one year for a Class III license, or to less than 1/2 year for a Class IV or Class V license. — b. a. Under no circumstances shall category experience, training, and education substitutions exceed 50% of the total experience required in the appropriate subdivision of 18 VAC 160-20-90.~~

~~— c. b. No category experience, training, or education substitutions are permitted for the experience required to obtain a Class VI, Class V or a Class IV license as specified in 18 VAC 160-20-90 B.~~

~~2. Category experience substitution. One half of the actual experience gained in the other category may be substituted for required experience in the category of the license being applied for.~~

~~3. Education substitution. Education may be substituted for part of the required experience, subject to the limitations in 18 VAC 160-20-100 A as follows:~~

~~— a. Education used to meet the educational requirements for any class of license may not be substituted for experience.~~

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1 ~~—— b. Formal education. Formal education courses at a post secondary level in physical,~~
2 ~~biological or chemical science; engineering or engineering technology; waterworks or~~
3 ~~wastewater works operation; or public health may be substituted for part of the required~~
4 ~~experience.~~

5
6 ~~—— (1) All education substituted for experience must be relevant to the category and~~
7 ~~classification of the license being applied for.~~

8
9 ~~Education may be substituted for experience at a rate of one month experience for each semester~~
10 ~~hour of college credit approved by the board. One quarter hour of college credit will be~~
11 ~~considered equal to 2/3 of a semester hour.~~

12
13 ~~—— c. Specialized training. Waterworks or wastewater works operator training courses,~~
14 ~~seminars, workshops, or similar specialized training, specifically approved by the board, may be~~
15 ~~substituted for part of the required experience.~~

16
17 ~~—— (1) All training substituted for experience must be relevant to the category and~~
18 ~~classification of the license being applied for.~~

19
20 ~~—— (2) Training may be substituted for experience at a rate of one month experience for each~~
21 ~~training credit (TC) approved by the board. One TC is awarded for each 10 hours of classroom~~
22 ~~contact time or for each 20 hours of laboratory exercise and field trip time. No credit towards~~

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1 ~~TCs is granted for breaks, meals, receptions, and time other than classroom, laboratory and field~~
2 ~~trip contact time.~~

3
4 ~~—— (3) All courses used for substitution must be approved by the board utilizing the criteria set~~
5 ~~forth in Appendix A.~~

6
7 1. Category experience substitution. One-half of the actual experience gained in the
8 other category may be substituted for required experience in the category of the
9 license being applied for.

10
11 2. Education substitution. Education may be substituted for part of the required
12 experience in the category of the license being applied for, subject to the following
13 limitations:

14
15 a. Education used to meet the educational requirements for any class of license may
16 not be substituted for experience.

17
18 b. Formal education courses at a post-secondary level in physical, biological or
19 chemical science; engineering or engineering technology; waterworks or
20 wastewater works operation; or public health may be substituted for part of the
21 required experience.

22

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1 (1) All education substituted for experience must be relevant to the category and
2 classification of the license being applied for.

3
4 (2) Education may be substituted for experience at a rate of up to one month
5 experience for each semester hour of college credit approved by the board.
6 One quarter hour of college credit will be considered equal to 2/3 of a
7 semester hour.

8
9 (3) Substitution of formal education experience will be approved by the board
10 only for applicants who submit a transcript from the institution at which the
11 course was taken.

12
13 c. Training. Waterworks or wastewater works operator training courses, seminars,
14 workshops, or similar training, specifically approved by the board, may be
15 substituted for part of the required experience.

16
17 (1) All training substituted for experience must be relevant to the category and
18 classification of the license being applied for.

19
20 (2) Training may be substituted for experience at a rate of one month experience
21 for each training credit (TC) approved by the board. Up to one TC is awarded
22 for each 10 hours of classroom contact time or for each 20 hours of laboratory

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1 exercise and field trip contact time. No credit towards TCs is granted for
2 breaks, meals, receptions, and time other than classroom, laboratory and field
3 trip contact time.

4
5 (3) All courses used for substitution must be approved by utilizing the criteria set
6 forth in Part VI of this chapter.

7
8 (4) Substitution of training for experience will be approved by the board only for
9 applicants who submit a copy of an appropriate certificate identifying the
10 subject matter of the course and the TC value, and signed by a representative
11 of the organization sponsoring the training.

12
13 3. Limitations on substitution.

14
15 a. Under no circumstances shall category experience, education, and training
16 substitutions exceed 50% of the total experience required under the appropriate
17 sections of 18 VAC 160-20-90.

18
19 b. No category experience, education, or training substitutions are permitted for the
20 experience required to obtain a Class VI, Class V or a Class IV license as
21 specified in 18 VAC 160-20-90 B.

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1 D. Examination.

2

3 A board-approved examination shall be administered at least twice a year.

4

5 1. An individual may take the examination prior to fulfilling the education and
6 experience requirements, provided all requirements will be met within three months
7 after the date the applicant will take the examination. ~~The results of the examination~~
8 ~~and the license shall not be issued until all applicable requirements have been met and~~
9 satisfactorily verified.

10

11 2. An individual who is unable to take an examination at the time scheduled shall notify
12 the board prior to the date of the examination; such an individual shall be rescheduled
13 for the next examination. Failure to notify the board may require the submittal of a
14 new application and payment of fees, ~~in accordance with § 1.4 and § 2.4 A.~~

15

16 3. Upon submission of an application for reexamination form provided by the board and
17 payment of the reexamination fee, an applicant who is unsuccessful in passing an
18 examination will be allowed to retake ~~any examination(s) given the examination up to~~
19 two times within two years of the date of notification of initial unsuccessful
20 examination results. ~~After the two year period has elapsed~~ If the two-year period
21 elapses, or if an applicant fails to pass both re-examinations, an then the applicant will
22 be required to submit a new application with fee in accordance with ~~these regulations~~

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1 this chapter in order to take an examination. ~~Applications for reexamination must be~~
2 ~~received in the Department of Commerce at least 60 days prior to a scheduled~~
3 ~~examination in order to be eligible to sit for that examination.~~

4
5 4. Applications for examination and reexamination must be received by the Department
6 of Professional and Occupational Regulation at least 60 days prior to a scheduled
7 examination in order to be eligible to sit for that examination.

8
9 **~~18 VAC 160-20-100. Application. (Repealed)~~**

10
11 ~~— A. Any person seeking licensure by reciprocity or by education, experience, and~~
12 ~~examination shall submit a fully completed application with the appropriate fee(s) attached.~~
13 ~~Incomplete applications will be returned to the applicant. Application for licensure by~~
14 ~~examination must be received in the Department of Professional and Occupational Regulation 60-~~
15 ~~days prior to a scheduled examination in order to be eligible to sit for that examination.~~

16
17 ~~— B. All applications of candidates will be reviewed by the Department of Professional and~~
18 ~~Occupational Regulation staff to determine eligibility for licensure and examination within 50~~
19 ~~days of receipt at the offices of the Department of Professional and Occupational Regulation.~~
20 ~~Any applicant may appeal the initial review, in writing, to the board within 60 days of the staff's~~
21 ~~determination. No applicant will be approved for licensure unless he meets all of the~~
22 ~~requirements of Part II of this chapter.~~

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~~C. Applicants who have been found ineligible to sit for an examination may request further consideration by submitting a letter to the board with the necessary evidence of additional qualifications, training, or experience. No additional fee will be required, provided all requirements for licensing are met within two years from the date of original application.~~

[Moved to 18 VAC 160-20-76]

18 VAC 160-20-102. Fees

- A. All fees are nonrefundable.

- B. The date of receipt of the fee by the board is the date which shall be used to determine whether the fee is timely received.

- C. The following fees shall apply:

<u>Application Fee</u>	<u>\$85</u>
<u>Renewal Fee</u>	<u>\$45</u>
<u>Late Renewal Fee, Additional</u>	<u>\$25</u>
<u>Re-examination Fee</u>	<u>\$75</u>
<u>Bad Check or Other Instrument Penalty</u>	<u>\$25</u>

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1
2 D. A fee of \$25 will be charged, in addition to the fees established in this section, for
3 submitting a check to the board which is dishonored by the institution upon which it is
4 drawn.

5
6 **18 VAC 160-20-104. Maintenance of License.**

7
8 1. Notice in writing shall be given to the board in the event of any change of the licensee's
9 name or address. Such notice shall be received by the board within 30 days of the change
10 of the name or address.

11
12 2. All licensees shall operate under the name in which the license is issued.

13
14

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1 **PART III.**

2
3 **RENEWAL.**

4
5
6 **18 VAC 160-20-106. Renewal.**

7
8 A. Licenses for waterworks operators shall expire on the last day of February of each odd-
9 numbered year. Licenses for wastewater works operators shall expire on the last day of
10 February of each even-numbered year.

11
12 B. The Department of Professional and Occupational Regulation shall mail a renewal notice
13 to the licensee outlining the procedures for renewal. Renewal notices shall be mailed to
14 the licensee at the last known address of record. Failure to receive written notice shall
15 not relieve the licensee of the obligation to renew and pay the required fee outlined in 18
16 VAC 160-20-102.

17
18 C. Each licensee applying for renewal shall return the renewal notice, fee, and, in the case of
19 waterworks licensees only, a statement that the applicant for license renewal has met the
20 CPE requirement established in 18 VAC 160-20-109 of this chapter prior to the
21 expiration date shown on the license. If the licensee fails to receive the renewal notice, a
22 copy of the expired license may be submitted in place of the renewal notice along with

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1 the required fee and, in the case of waterworks licensees only, a statement that the CPE
2 requirement in 18 VAC 160-20-109 of this chapter has been met.

3
4 D. The date on which the renewal fee and any required forms are actually received by the
5 board or its agent shall determine whether an additional fee is due.

6
7 E. If the requirements of subsection C of this section are met more than 30 days but less
8 than 12 months after the expiration date on the license, a late penalty fee shall be required
9 as established in 18 VAC 160-20-102. The date on which the renewal application, any
10 required documentation and the required fees are actually received by the board or its
11 agent shall determine whether the licensee is eligible for renewal and whether an
12 additional fee is due.

13
14 F. Any individual who fails to renew his license within 12 months after the expiration date
15 printed on the license shall apply for a new license by examination in accordance with
16 Part II of this chapter. Such individual shall be deemed to be eligible to sit for the
17 examination for the same category and class of license as the expired license.

18
19 G. The board may deny renewal of a license for the same reasons as it may refuse initial
20 licensure or discipline a licensee.

21
22 **18 VAC 160-20-109. Waterworks operator continuing profession education (CPE).**

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A. Effective with the February 2003 license renewal cycle, each licensed waterworks operator shall have completed the following number of CPE contact hours required for his class of license:

1. Class I, II, and III operators shall obtain a minimum of 20 contact hours during each license renewal cycle.
2. Class IV operators shall obtain a minimum of 16 contact hours during each license renewal cycle.
3. Class V operators shall obtain a minimum of eight contact hours during each license renewal cycle.
4. Class VI operators shall obtain a minimum of four contact hours during each license renewal cycle.

CPE provisions do not apply for the renewal of licenses that were held for less than two years on the date of expiration.

B. The subject matter addressed during CPE contact hours shall be limited to the content areas covered by the board's examination.

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C. Any course approved by the board for substitution as training credits (TC) or formal education semester hours, as provided for in section 18 VAC 160-20-160, shall also be acceptable on an hour-for-hour basis for CPE contact hours. One semester hour of college credit shall equal 15 CPE contact hours and one quarter hour of college credit shall equal 10 CPE credit hours.

D. The following evidence shall be maintained to document completion of the hours of CPE specified in subsection A of this section:

1. Evidence of completion of a structured training activity which shall consist of the name, address and telephone number of the sponsor;
2. The date(s) the applicant participated in the training;
3. Descriptive material of the subject matter presented; and
4. A statement from the sponsor verifying the number of hours completed.

E. Each licensee shall maintain evidence of the satisfactory completion of CPE for a period of at least one year following the end of the license renewal cycle for which the CPE was taken. Such documentation shall be in the form required by subsection D of this section

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1 and shall be provided to the board or its duly authorized agents upon request.

2

3 F. The licensee shall not take the same training course or structured training activity more
4 than once during a single license renewal cycle to meet the CPE requirement unless the
5 same training course or structured training activity is an annual requirement established
6 by Virginia or federal regulations.

7

8 G. The licensee may take a training course or structured training activity which has been
9 mandated by Virginia or federal regulation towards fulfilling the CPE requirement.

10

11 H. The licensee may petition the board for additional time to meet the CPE requirement.
12 However, CPE hours earned during a license renewal cycle to satisfy the CPE
13 requirement of the preceeding license renewal cycle shall be valid only for that
14 preceeding license renewal cycle.

15

16

17 **PART III. STANDARDS OF PRACTICE**

18

19 ~~**18 VAC 160-20-110. Discipline. (Repealed)**~~

20

21 ~~A. The Board, in its discretion, may fine any licensee, or may suspend or revoke a license,~~
22 ~~either or both, if it finds that:~~

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~~1. The license was obtained or renewed through fraud or misrepresentation; or~~

~~2. The licensed operator has been found guilty by the board, or by a court of any material misrepresentation in the course of performing his operating duties; or~~

~~3. The licensed operator has not demonstrated reasonable care, judgment or application of his knowledge and ability in the performance of his operating duties; or~~

~~4. The licensed operator violates or induces another person to violate any provisions of Chapters 1, 2, 3, and 23 of Title 54.1 of the Code of Virginia, or any provisions of this chapter.~~

~~B. The board, in its discretion, may refuse to grant or renew a license of any person for any of the reasons specified in subsection A of this section.~~

[Moved to 18 VAC 160-20-140]

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PART IV.

CLASSIFICATION REQUIREMENTS.

18 VAC 160-20-120. Waterworks

A. A Class VI waterworks licensee may operate any waterworks as follows:

- 1. A waterworks providing no treatment and serving fewer than 400 persons; or
- 2. A waterworks classified by the Virginia Department of Health as a Class VI waterworks.

B. A Class V waterworks licensee may operate any waterworks as follows:

- 1. A waterworks serving 400 or more persons which (i) provides no treatment; or (ii) employs hypochlorination for disinfection; or
- 2. A waterworks classified by the Virginia Department of Health as either a Class V or Class VI waterworks.

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1 C. A Class IV waterworks licensee may operate any waterworks as follows:

2
3 1. A waterworks serving fewer than 5,000 persons or having a design hydraulic capacity
4 of less than 0.5 MGD, employing one or more of the following (i) disinfection other
5 than with hypochlorination, (ii) corrosion control, (iii) iron and manganese removal,
6 (iv) ion exchange, (v) membrane technology without pretreatment, (vi) slow sand
7 filtration, (vii) aeration, (viii) rechlorination other than with hypochlorination, or (iv)
8 activated carbon contactors; or

9
10 2. A waterworks classified by the Virginia Department of Health as either a Class IV, V,
11 or VI waterworks.

12
13 D. A Class III waterworks licensee may operate any waterworks as follows:

14
15 1. A waterworks serving fewer than 5,000 persons or having a design capacity less than
16 0.5 MGD, employing chemical coagulation or lime softening in combination with one
17 or more of the following (i) sedimentation, (ii) rapid sand filtration with a filtration
18 rate of 2 gpm/square foot or less, (iii) fluoridation, (iv) disinfection, (v) aeration, (vi)
19 corrosion control, or (vii) membrane technologies; or

20
21 2. A waterworks serving 5,000 or more persons or having a design hydraulic capacity of
22 0.5 MGD, employing one or more of the following; (i) disinfection other than with

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1 hypochlorination, (ii) corrosion control, (iii) iron and manganese removal, (iv) ion
2 exchange , (v) membrane technology without pretreatment, (vi) slow sand filtration,
3 (vii) aeration, (viii) rechlorination other than with hypochlorination, or (ix) activated
4 carbon contactors; or

5
6 3. A waterworks employing (i) membrane technology requiring pretreatment consisting
7 of pH adjustment; or (ii) diatomaceous earth filtration, coupled with aeration,
8 corrosion control, disinfection, or fluoridation; or

9
10 4. A waterworks employing fluoridation which is not under a higher classification; or

11
12 5. A waterworks classified by the Virginia Department of Health as either a Class III,
13 IV, V or VI waterworks.

14
15 E. A Class II waterworks licensee may operate any waterworks as follows:

16
17 1. A waterworks serving 5,000 or more persons but fewer than 50,000 persons or having
18 a design hydraulic capacity of 0.5 MGD or more but less than 5.0 MGD, whichever
19 falls within the range, employing chemical coagulation or lime softening in
20 combination with one or more of the following; (i) sedimentation, (ii) rapid sand
21 filtration, (iii) fluoridation, (iv) disinfection, (v) aeration, (vi) corrosion control, or
22 (vii) membrane technologies; or

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2. A waterworks serving fewer than 50,000 persons or having a design hydraulic capacity of less than 5.0 MGD which employs chemical coagulation or lime softening coupled with multimedia granular filtration or granular filtration at rates above 2.0 gpm/square foot (high rate filtration) in combination with one or more of the following: (i) sedimentation, (ii) fluoridation, (iii) disinfection, (iv) aeration, or (v) corrosion control; or

3. A waterworks employing biological activated carbon contactors or membrane technology requiring pretreatment other than pH adjustment; or

4. A. Waterworks classified by the Virginia Department of Health as either a Class II, III, IV, V or VI waterworks.

F. A Class I waterworks licensee may operate any waterworks listed in subsections A through E of this section.

G. The term membrane technologies includes (i) electrical dialysis reversal, (ii) reverse osmosis, (iii) ultra filtration, (iv) micro filtration, and (v) nano filtration.

18 VAC 160-20-130. Wastewater works.

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- 1 A. A Class IV wastewater works licensee may operate any wastewater works as follows:
 - 2
 - 3 1. A wastewater works employing natural treatment methods (i.e., those not utilizing
4 aerated or mixed flows and not using electrical or outside energy sources to
5 accomplish treatment) with a design hydraulic capacity greater than 0.4 MGD but
6 equal to or less than 1.0 MGD; or
 - 7
 - 8 2. A wastewater works classified by the Virginia Department of Health or the Virginia
9 Department of Environmental Quality as a Class IV wastewater works.
- 10
- 11 B. A Class III wastewater works licensee may operate any wastewater works as follows:
 - 12
 - 13 1. A wastewater works using biological treatment methods consisting of but not limited
14 to (i) suspended growth reactors, (ii) aerated lagoons, (iii) constructed wetlands, (iv)
15 biological filters or other attached growth contactors, (v) processes utilizing
16 biological nutrient control, or (vi) processes utilizing land application having a design
17 hydraulic capacity greater than 0.04 MGD, but equal to or less than 0.5 MGD; or
 - 18
 - 19 2. A wastewater works using advanced waste treatment methods consisting of but not
20 limited to (i) ammonia stripping, (ii) breakpoint chlorination, (iii) carbon adsorption,
21 (iv) chemical coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, or (viii)

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- 1 demineralization (ion exchange, reverse osmosis or electro dialysis) having a design
- 2 hydraulic capacity greater than 0.04 MGD, but equal to or less than 0.5 MGD; or
- 3
- 4 3. A wastewater works using combinations of biological and advanced waste treatment
- 5 methods having a design hydraulic capacity greater than 0.04 MGD, but equal to or
- 6 less than 0.1 MGD; or
- 7
- 8 4. A wastewater works using natural treatment methods (i.e., those not using aerated or
- 9 mixed flows and not using electrical or outside energy sources to accomplish
- 10 treatment) with a design hydraulic capacity greater than 1.0 MGD; or
- 11
- 12 5. A wastewater works classified by the Virginia Department of Health or the Virginia
- 13 Department of Environmental Quality as either a Class III or IV wastewater works.

14

15 C. A Class II wastewater works licensee may operate any wastewater works as follows:

- 16
- 17 1. A wastewater works using biological treatment methods consisting of but not limited
- 18 to (i) suspended growth reactors, (ii) aerated lagoons, (iii) constructed wetlands, (iv)
- 19 biological filters or other attached growth contactors, (v) processes utilizing
- 20 biological nutrient control, or (vi) processes utilizing land application having a design
- 21 hydraulic capacity greater than 0.5 MGD, but equal to or less than 5.0 MGD; or
- 22

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- 1 2. A wastewater works using advanced waste treatment methods consisting of but not
2 limited to (i) ammonia stripping, (ii) breakpoint chlorination, (iii) carbon adsorption,
3 (iv) chemical coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, or (viii)
4 demineralization (ion exchange, reverse osmosis or electrodialysis) having a design
5 hydraulic capacity greater than 0.5 MGD, but equal to or less than 5.0 MGD; or
6
7 3. A wastewater works using combinations of biological and advanced waste treatment
8 methods, having a design hydraulic capacity greater than 0.1 MGD, but equal to or
9 less than 2.5 MGD; or
10
11 4. A wastewater works classified by the Department of Health or the Department of
12 Environmental Quality as either a class II, III or IV wastewater works.
13
14 D. A Class I wastewater works licensee may operate any wastewater works listed in
15 subsections A through C of this section.
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PART V.

STANDARDS OF PRACTICE

18 VAC 160-20-140. Discipline.

A. The board may fine any licensee and/or revoke or suspend any license, in accordance with the provisions of the Administrative Process Act, when a licensee has been found to have violated or cooperated with others in violating any of the provisions of Chapter 23 of Title 54.1, of the Code of Virginia, or any regulations of the board including the following grounds of discipline:

- 1. The license was obtained or renewed through fraud or misrepresentation; or
- 2. Any conviction by a court in any jurisdiction of any felony or of any misdemeanor involving lying, cheating or stealing, or of any material misrepresentation while engaged in waterworks or wastewater works activities. Any plea of nolo contendere shall be considered a conviction for purposes of this subsection. A certified copy of a final order, decree or case decision by a court or regulatory agency with the lawful authority to issue such order, decree or case decision shall be prima facia evidence of such conviction or discipline; or

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3. The licensee did not demonstrate reasonable care, judgment, or application of the required knowledge, skill and ability in the performance of the operating duties; or
4. The licensee violated or induced another person to violate any provisions of Chapters 1, 2, 3 or 23 of Title 54.1 of the Code of Virginia, or any provision of this chapter.
5. The board may refuse to grant a license to or renew the license of any person for the same reasons as it may discipline a licensee.
6. Having been found guilty by the board, an administrative body or by a court of any material misrepresentation in the course of performing his operating duties.
7. Failing to inform the board in writing within 30 days of pleading guilty or nolo contendere or being convicted or found guilty of any felony which resulted in the significant harm or the imminent and substantial threat of harm to human health or the environment.
8. Gross negligence, or a continued pattern of incompetence, in the practice as a waterworks or wastewater works operator.

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1 **APPENDIX A. PART VI.**

2
3 **APPROVAL OF SPECIALIZED TRAINING.**

4
5
6 **18 VAC 160-20-160. Approval of training.**

7
8 ~~—Specialized waterworks~~ Waterworks and wastewater works operator training for all licenses,
9 may be substituted for some of the experience required for Class III, Class II and Class I
10 licenses, subject to the limitations in this ~~appendix~~ section. Training courses that may be
11 substituted for required experience must be approved by the board except prior to the training
12 activity in accordance with the following procedure: those provided by federal or state agencies
13 institutions, schools and universities approved by the State Council of Higher Education for
14 Virginia, for which continuing education units are awarded. Training courses requiring board
15 approval shall be approved by the board prior to commencing in accordance with the following:

- 16
17 A. Training ~~activities~~ courses for which experience credit may be granted must be conducted
18 in general conformance with the guidelines of the ~~Council on the Continuing Education~~
19 ~~Unit~~ International Association for Continuing Education and Training. The board
20 reserves the right to waive any of the requirements of the ~~council's~~ Association's
21 guidelines on a case-by-case basis. Only classroom, laboratory and field trip contact time
22 will be used to compute training credits. No credit will be given for breaks, meals, or

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1 receptions.

2

3 1. Organization. The board will only approve training offered by a sponsor who is an
4 identifiable organization with a mission statement outlining its functions, structure,
5 process and philosophy, and that has a staff of one or more persons with the authority
6 to administer and coordinate a training credit (TC) program.

7

8 2. TC records. The board will only approve training offered by a sponsor who
9 maintains TC records for all participants for a minimum of ~~20~~ seven years, and who
10 has a written policy on retention and release of TC records.

11

12 3. Instructors. The board will only approve training conducted by personnel who have
13 demonstrated competence in the subject being taught, an understanding of the
14 learning objective, a knowledge of the learning process to be used, and a proven
15 ability to communicate.

16

17 4. Objectives. The board will only approve courses that have a series of stated
18 objectives that are consistent with the job requirements of waterworks and wastewater
19 works operators. The training course content must be consistent with those objectives.

20

21 5. Course completion requirements. For successful completion of a training ~~program~~
22 course, participants must attend 90% or more of the class contact time and must

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1 demonstrate their learning through written examinations, completion of a project,
2 self-assessment, oral examination, or other assessment technique.

3
4 B. The board shall consider the following information, to be submitted by the course
5 sponsor or instructor on forms provided by the board, at least 45 days prior to the
6 scheduled training ~~activity~~ course:

7
8 1. Course information.

9
10 a. Course title

11
12 b. Planned audience

13
14 c. Name of sponsor

15
16 d. Name, address, phone number of contact person

17
18 e. Scheduled presentation dates

19
20 f. Detailed course schedule, hour-by-hour

21
22 g. List of planned breaks

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- 1
- 2 h. Scheduled presentation location
- 3
- 4 i. Relevancy of course to waterworks or wastewater works operator licensing
- 5
- 6 2. Instructor qualifications.
- 7
- 8 a. Name of instructor
- 9
- 10 b. Title, employer
- 11
- 12 c. Summary of qualifications to teach this course
- 13
- 14 3. Training materials.
- 15
- 16 a. Course objectives. A listing of the course objectives stated in ~~the~~ terms of the
- 17 skills, knowledge, or attitude the participant will be able to demonstrate as a result
- 18 of the training.
- 19
- 20 b. Course outline. A detailed outline showing the planned activities that will occur
- 21 during the training ~~program~~ course, including major topics, planned presentation
- 22 sequence, laboratory and field activities, audio-visual presentation, and other

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- 1 major activities.
- 2
- 3 c. Course reference materials. A list of the name, publisher and publication date for
- 4 commercially available publications. For reference materials developed by the
- 5 course sponsor or available exclusively through the course, a copy of the
- 6 reference.
- 7
- 8 d. Audio-visual support materials. A listing of any commercially available
- 9 audio-visual support material that will be used in the program. A brief description
- 10 of any sponsor or instructor generated audio-visual material that will be used.
- 11
- 12 e. Handouts. Identification of all commercially available handout materials that will
- 13 be used; as well as copies of all other planned handouts.
- 14
- 15 4. Determination of successful completion. A description of the means that will be used
- 16 to ~~determine the successful completion of the training program by individual~~
- 17 ~~attendees, such as examinations, projects, personal evaluations by the instructor, or~~
- 18 ~~other recognized evaluation techniques~~ assess the learning of each participant to
- 19 determine successful completion of the training program, such as examinatiions,
- 20 projects, personal evaluations by the instructor, or other recognized evaluation
- 21 techniques.
- 22

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1 ~~B. Substitution of training for experience will be approved by the board only for~~
2 ~~applicants whose names appear on a roster of those participants who successfully~~
3 ~~completed the course, including their names and social security numbers.~~
4 ~~Submitted to the board by the sponsor, and who submit a copy of an appropriate~~
5 ~~certificate identifying the subject matter of the course and the TC value, provided~~
6 ~~to the participant by the sponsor.~~

7
8 D.C. Recurring training programs. If there are plans to present the same course of instruction
9 routinely at multiple locations with only minor modifications and changes, the board may
10 approve the overall program rather than individual presentations if so requested by the
11 sponsor.

- 12
13 1. The board shall consider all of the information listed above except those items related
14 to specific offerings of the course.
- 15
16 2. Board approval may be granted for a specific period of time or for an indefinite
17 period.
- 18
19 3. Board approval will apply only to those specific offerings ~~appearing on listings~~
20 ~~provided to the board prior to conducting the training. The listing shall contain for~~
21 ~~each offering the dates, locations, and instructors. certified by the sponsoring~~
22 ~~organization as having been conducted by instructors meeting the established criteria~~

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1 and in accordance with the board approved course outlines and objectives.

2

3 4. To maintain approval of the program, changes made to the program since its approval
4 must be submitted to the board.

5

6

7

8 I certify that this regulation is full, true, and correctly dated.

9

10 _____

11 (Signature of Certifying Official)

12 David E. Dick, Assistant Director

13 Department of Professional and Occupational Regulation

14

15 Date: September 14, 2000

16

17

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19